



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/147,813	08/31/1999	JEAN-LOUIS BRAVET	124707960VPC	2264

7590

12/31/2001

OBLON SPIVAK MCCLELLAND
MAIER & NEUSTADT
1755 JEFFERSON DAVIS HIGHWAY
FOURTH FLOOR
ARLINGTON, VA 22202

EXAMINER

PAULRAJ, CHRISTOPHER

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 12/31/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

mk-18

Office Action Summary

Application No.

09/147,813

Applicant(s)

BRAVET ET AL.

Examiner

Christopher G. Paulraj

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 40-65 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 40-65 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. The amendment filed on October 15, 2001 has been entered. Claims 40-65 are pending.

2. Claims 40-45, 49, 52, 62, and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motter et al. (U.S. Patent 4,112,171) in view of Hirmer (U.S. Patent 5,525,401) for the reasons set forth on paragraphs 5-8 of the Office Action mailed June 14, 2001.

3. Claims 46 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motter et al. in view of Hirmer as applied to claim 40 above, and further in view of Brier et al. (U.S. patent 5,849,414) for the reasons set forth on paragraphs 9-10 of the Office Action mailed June 14, 2001.

4. Claims 48, 50, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motter et al. in view of Hirmer as applied to claim 40 above, and further in view of Oliver et al. (U.S. Patent 4,634,637) for the reasons set forth on paragraphs 11-12 of the Office Action mailed June 14, 2001.

5. Claims 53-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motter et al. in view of Hirmer as applied to claim 40 above, and further in view of Tatebayashi (U.S. Patent 4,386,042) for the reasons set forth on paragraphs 13-14 of the Office Action mailed June 14, 2001.

6. Claims 44 and 63-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motter et al. in view of Hirmer as applied to claim 63 above, and further in view of EP-A1-0524417 and EP-A1-0718348. Applicants own disclosure has stated that these

Art Unit: 1773

documents disclose the claimed scratch resistant layer comprising a network of entangled organic and inorganic chains linked to each other by silicon-carbon bonds, which are provided by Ormocer varnish (see Specification pages 4-5). An oral translation of these documents disclosed that these compositions are known to be used as scratch resistant coatings on plastic surfaces and have an advantage over prior art coatings in that they require less hardening time. One skilled in the art would therefore have found it obvious to use these coatings as the scratch resistant layer of the structure provided by Motter et al. The motivation for doing so would have been to provide a coating layer that requires less hardening time.

Response to Arguments

7. Applicant's arguments filed 10/15/2001 have been fully considered but they are not persuasive.
8. Applicants traverse the rejections under 35 U.S.C. § 103 on essentially the same grounds set forth in the response filed March 13, 2001 (Paper no. 12). The reasons for maintaining the rejections, set forth in the last Office Action (Paper no. 15), are entirely incorporated herein. In response, Applicants argue that the Examiner has improperly extracted from Hirmer only that disclosure which supports his rejection, without considering the reference as a whole. Applicants cite In re Ehrreich, 200 USPQ 504 (CCPA 1979) to support their position that it was improper for the Examiner to incorporate the teaching of a plastic substrate having the claimed thickness from Hirmer

Art Unit: 1773

without also incorporating the relatively thin sheet which has a thickness greater than both the presently-recited at least one skin layer and said scratch-resistant layer.

9. This is not persuasive because, unlike the facts of Ehrreich, the Hirmer reference does not specifically teach away from using the relatively thick substrate layer with thinner top layers. Both Motter et al. (see col. 5, lines 8-16) and Hirmer (see col. 3, line 11) teach that the top plastic layer, i.e. the layer located immediately below the scratch resistant layer, can have a minimum thickness of about 5 mils (127 μm). There is no showing, however, that using a lower thickness top layer would be in any way undesirable. In the absence of disclosing any such criticality of thickness in the prior art structures, one skilled in the art would have found it obvious to adjust the thickness of the top layers to fall within the claimed upper limit of 100 μm . The motivation for doing so would have been to optimize the abrasion resistance quality. As stated in the last Office Action, a change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955).

10. In response, Applicants argue that even if Rose is applicable precedent today, it is not an absolute rule. They state that were it clear that the prior art disclosed or suggested that a glass substrate could be substituted with a plastic substrate to obtain a functionally similar article without consideration of any factors except weight, then the Examiner might have a point as to the obviousness of making the substitution. They go on to state that there is no such disclosure in the art, and it is clear from the disclosure in Hirmer (col. 1, lines 25-28) that simply replacing a glass substrate with a plastic substrate involves consideration of other factors.

Art Unit: 1773

11. The examiner once again points out that the primary reference, Motter et al., teaches that an "all plastic structure" can be used in place of the glass substrate in an automotive glazing (col. 1, line 38). The secondary reference, Hirmer is used to further support the position that one skilled in the art would have found it obvious to make such a substitution. While the cited portions of Hirmer states that in order for motor vehicle makers to shift from glass to plastics, the plastic window must be cost effective in other ways besides weight reduction, it is clearly evident that one skilled in the art would have the skills and knowledge to replace glass substrates with plastic. Reducing the weight is just one particular motivation for doing so.

12. In response to the assertion in the last Office Action that the products obtained in the presently recited product-by-process claims are not materially different from the products disclosed in the prior art, Applicants point to the specification, page 7, line 24 which allegedly discloses the advantages of the final product formed when made from either of the recited processes herein.

13. The portions cited by the Applicants do not seem to support this conjecture. The portions cited seem to indicate that any advantageous results obtained are from inherent material properties of the scratch resistant layer and not the result of the recited process steps. See page 7, lines 32-35 ("it is necessary to choose the composition of the scratch-resistant layer so that it can be bent, in order to avoid subsequent flaking problems.") Furthermore, even if the process steps are necessary to obtain advantageous results, Applicants have not clearly demonstrated how the claimed products are in any way superior to the structures disclosed in the prior art.

Art Unit: 1773

14. Applicants also argue that the use of the Tatebayashi reference in the rejection of the process claims was improper. They ask if the Examiner can identify any process used for making windows on the order of 50 mm in diameter that has also been used to make windows of a size for making motor vehicle windows. This is not considered persuasive because Tatebayashi does not particularly limit the size of the structures that can be made using its process. Furthermore, it is well known in various engineering disciplines to "scale up" production processes in order to make larger products. One skilled in the art would have found it obvious to use the process disclosed in Tatebayashi to make larger structures such as the claimed motor vehicle windows. The motivation for doing so would have to improve the uniformity of the surface hardness and reduce the number of substandard products, complications in coating, and high costs (see col. 1-col. 2). Contrary to Applicants assertion, this is not a situation of "obvious to try" because there is nothing in the disclosure of Tatebayashi which seems to limit the size of the products that can be produced.

15. Finally, applicants assert that the subject matter of claims 44 and 63-65 is not simply a cured organopolysiloxane compound and the teachings of Motter et al. does not satisfy this criteria. This is not considered persuasive. Claim 44 discloses that the scratch resistant layer c.) is inorganic, or consists essentially of networks or entangled inorganic or organic molecular chains linked to each other by silicon-carbon bonds. Since Applicants have not particularly limited the definition of "inorganic," the organopolysiloxane scratch resistant layers disclosed by Motter et al. is considered to fall within the scope of this category. The Polymer Science Dictionary (2d ed.) defines

Art Unit: 1773

an inorganic polymer as a polymer in which all, or a very high proportion of the chain atoms are not carbon atoms (attached). It goes on to include polysiloxanes as one of the examples. Since the organopolysiloxanes disclosed by Motter have a silicon backbone and not a carbon backbone, it is considered to fall within the category of inorganic polymers even though it may have organic side chains. Furthermore, for the reasons stated above, one skilled in the art would have found it obvious to include the scratch resistant coatings disclosed in EP-A1-0524417 and EP-A1-0718348 in the structure disclosed by Motter et al.

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Art Unit: 1773

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher G. Paulraj whose telephone number is (703) 308-1036. The examiner can normally be reached on Monday-Friday, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (703) 308-1261. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0661.

cgp
December 20, 2001


BLAINE COPENHEAVER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700